



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,682	02/20/2004	Harvey A. Restaino	C382.12-0146	6991
27367 7590 12/10/2007 WESTMAN CHAMPLIN & KELLY, P.A. SUITE 1400 900 SECOND AVENUE SOUTH MINNEAPOLIS, MN 55402-3319			EXAMINER BERHANU, SAMUEL	
			ART UNIT 2838	PAPER NUMBER
			MAIL DATE 12/10/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/783,682

Applicant(s)

RESTAINO ET AL.

Examiner

Samuel Berhanu

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,6-18 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,6-18 and 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA), in view of Polizzano (US 4,057,313), in view of Johnson (4,969,834) and in view of Moenkhaus et al. (US 6,500,025).

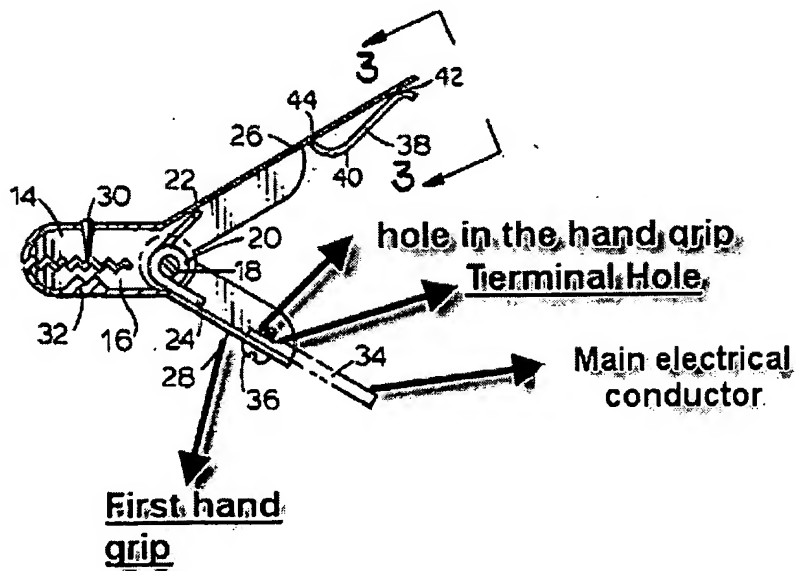
Regarding claims 1 and 18, APA discloses in Figure 1, a cable (124) including a main electrical conductor (the wire carrying the current can be consider as a main electrical conductor); a main electrical conductor capable of carrying a charging current and first and second electrical conductors, when at least one of first and second electrical conductors provide a Kelvin connection capability for injecting a forcing function into the battery and measuring a voltage across the battery (Please see figure 1 and page 14, lines 3-17 of applicant's specification) a first elongate clamp member (102) having a first jaw end (106) and a first hand grip end (110) separated by a first pivot coupling (see page 13, lines 22-29 of applicant specification), the first elongate clamp member having a conductive piece (136) coupled to the first jaw (106) end for making contact with a contact of the battery; a second elongate clamp member (104) having a second jaw end (108) and a second hand grip end (112) separated by a second

Art Unit: 2838

pivot coupling (116) (noted that both the jaws and the hand grips separated by pivot point), the second elongate clamp member pivotally joined to the first elongate clamp member by the first and second pivot couplings (116) whereby the first and second jaws are generally aligned together (please see page 14, lines 3-17 of applicant disclosures;

APA does not disclose explicitly, the first hand grip having a first hole formed therein and a terminal electrically coupled to the main electrical conductor having a terminal hole formed therein aligned with the first hole in the first hand grip; and a removable fastener which couples the terminal to the first hand grip through the first hole and the terminal hole whereby the first hand grip can be disconnected from the main electrical conductor.

However, Polizzano discloses in Figures 1-2



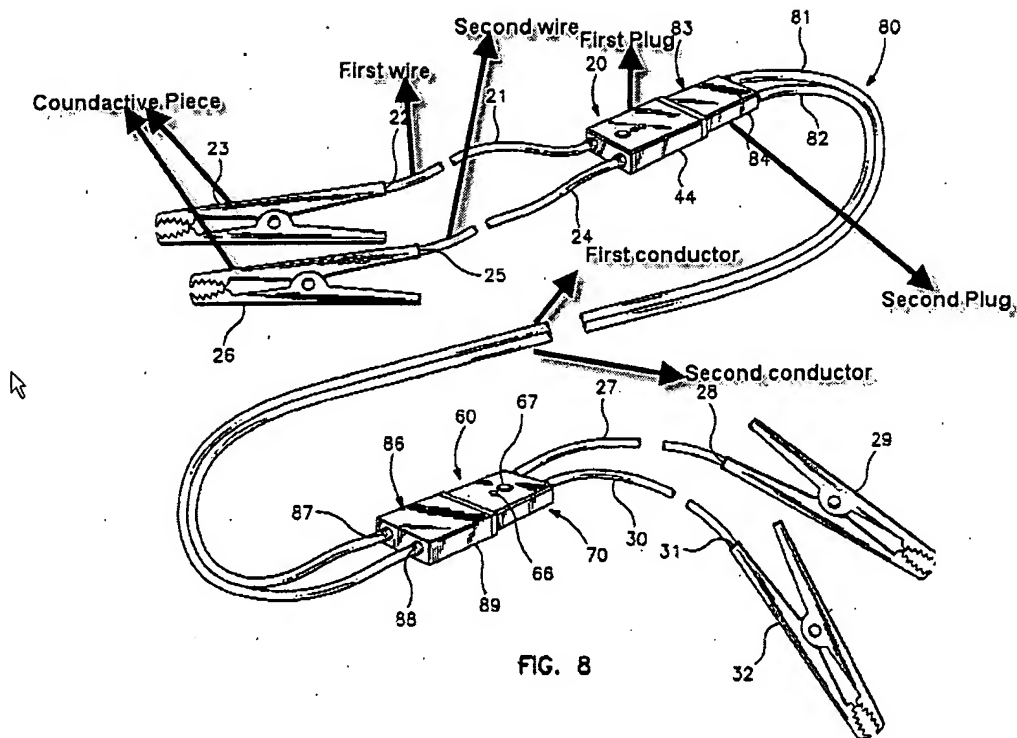
Art Unit: 2838

the first hand grip (28) having a first hole (the rivet 36 passes through the hole of the clamp) a terminal (the end portion of cable 34) electrically coupled to the cable (348) having a terminal hole (the pivot fastened position on the cable) formed therein aligned with the first hole in the first hand grip; and a removable fastener (36) which couples the terminal to the first hand grip through the first hole and the terminal hole whereby the first hand grip can be disconnected from the cable.

It would have been obvious to a person having ordinary skill in the art at the time of the invention to substitute APA's clamp assembly and secure the cable in the handle portion with a removable fastener means as taught by Polizzano in order to ensure a reliable secure mechanical and electrical.

Neither APA nor Polizzan disclose the apparatus including a first electrical plug electrically coupled to the clamp through first and second wire connectors of the clamp and a second electrical plug electrically coupled to the first and the second electrical conductors of the cable, the first and second plugs configured to removably electrically couple together.

Johnson discloses in Figure 8,



a first plug (20) electrically coupled to the conductive piece (see figure above)
coupled to the conductive piece through first and second wire (see figure above)
connectors of the clamp and a second electrical plug (83) coupled to the first
and second electrical conductors of the cable (see figure above), the second
electrical plug configured to removably electrically couple with the first electrical
plug to couple the first wire connector with the first electrical conductor and the
second wire connector with the second electrical conductor. (Column 4, lines 66-
68, Column 5, lines 1-8).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify APA's clamp assembly and add a plug as taught by Johnson in order to provide reliable connection between the cable and the clamp.

Johnson does not disclose explicitly, the connection means is a plug. Moenkhaus et al. disclose that a plug can be used as a cable connection means (see abstract and Figure 6).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to use a plug as connecting means as taught by Moenkhaus et al. in APA's clamp assembly in order to provide series or parallel cable connections.

3. Claims 3 and 7-8, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA), in view of Polizzano (US 4,057,313), in view of Johnson (4,969,834) and in view of Moenkhaus et al. (US 6,500,025), and further in view of Kowalski et al. (US 5,772,468).

Regarding Claims 3 and 22, Kowalski et al. disclose, the cable (48) includes a main electrical connector electrically coupled to the terminal and capable of carrying a high current (Column 5, lines 66-67). It would have been obvious to a person having ordinary skill in the art at the time of the invention to substitute APA's cable with a high current carrying cable as taught by Kowalski et al. in order to avoid power loss on the wire due to heat.

Regarding Claim 7, Kowalski et al. disclose in Figure 3 a spring (26) coupled to the first and second elongate clamp members configured to urge the first and second jaws together to a closed position (Column 4, lines 40-43).

Regarding Claim 8, Kowalski et al. disclose, the first hand grip and the second hand grip are covered with an insulating material (Column 2, lines 59-67).

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Polizzano in view of Johnson, in view of Moenkhaus as applied to Claim 1 above, and further in view of Vonderhaar et al. (US 6,469,511).

Regarding Claim 6, Vonderhaar et al. disclose in Figures 7 and 8 wherein at least one of the first electrical conductor (720) and the second electrical conductor (722), wherein at least one of the first connector and the second connector provides a sensor lead for sensing a physical property of the battery (720, Column 5, lines 10-15, Column 5, lines 1-26). It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a voltage monitoring means as taught by Vonderhaar et al. in APA's clamp assembly in order to monitor status of a battery.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Polizzano in view of Johnson, in view of Moenkhaus as applied to Claim 1 above, and further in view Yoshikawa et al. (US 4,983,086).

Regarding Claim 9, Yoshikawa discloses in Figure 4 and paragraphs 58, 62 and 66, the terminal comprises a tin-plated ring. It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify

APA's cable in order to have a thin-plated ring terminal as taught by Youshikawa in order to provide a hole as a securing means for the cable.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable APA in view of Polizzano in view of Johnson, in view of Moenkhaus as applied to Claim 1 above, and further in view Hatrock (US 4,983,086).

Regarding Claim 10, Hatrock discloses in Figure 1, the replaceable fastener comprises a nut and bolt. It would have been obvious to use a nut and a bolt fastener means as taught by Hatrock in APA's clamp in order to provide securable fastener assembly.

7. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Polizzano in view of Johnson, in view of Moenkhaus as applied to Claim 18 above, and further in view Vonderhaar et al. (US 6,469,511).

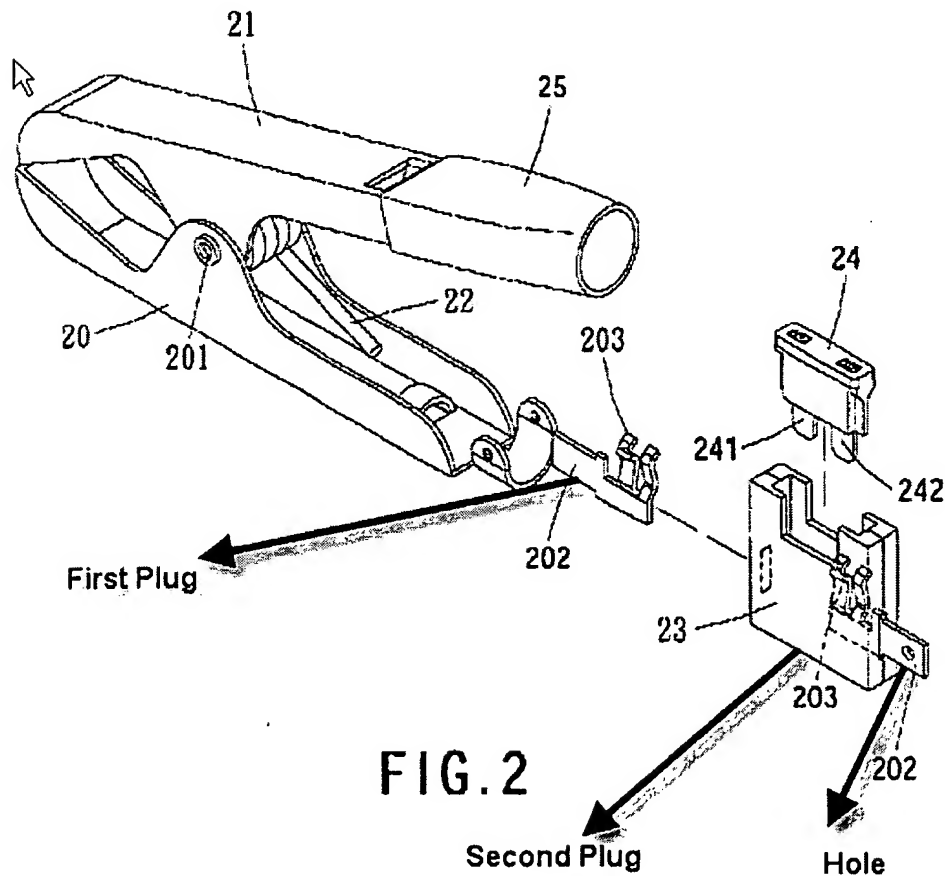
Regarding Claim 21, Vonderhaar et al. disclose in Figures 7 and 8 the first electrical conductor includes two electrically isolated electrical contacts which provide a Kelvin connection and the second electrical conductor comprises a sensor lead (720, Column 5, lines 10-15). It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a voltage monitoring means as taught by Vonderhaar et al. in APA's clamp assembly in order to monitor status of a batter.

8. Claims 11-14 rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Polizzano in view of Johnson, in view of Moenkhaus as applied to Claim 1 above, and further in view of Cheng et al. (US 6,796,841).

Regarding Claim 11, APA, Polizzano, Johnson and Moenkhasus discloses the

claim invention as claim 1 above except, wherein the first and second electrical plug removably electrically couple together and are housed in the first hand grip.

However, Cheng et al. discloses in Figure 2, wherein the first and second electrical plug removably electrically couple together and are housed in the first hand grip (noted that the above figure shows that all components are located in the handle).



It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify APA's clamp and position all the components with in the handle as taught by Cheng et al. in order to protect the connection from adverse weather.

Regarding Claim 12, Johnson discloses in figure 1, where in the first plug is coupled to the clamp through first and second wire connectors.

Regarding Claim 13, Johnson, where in the second plug is electrically coupled to the cable through first and second electrical conductors of the cable.

Regarding Claim 14, Johnson discloses, wherein the first and second wire connectors and the first and second electrical conductors are configured to removably electrically couple together through the first and second plugs.

9. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Polizzano in view of Johnson, in view of Moenkhaus, in view of Cheng et al. (US 6,796,841), and further in view of Vonderhaar et al. (US 6,469,511).

Regarding Claim 15, However, Vonderhaar et al. disclose in Figures 7 and 8, one of the first and second electrical connectors includes two electrically isolated electrical contacts that provide a Kelvin connection. It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a voltage monitoring means as taught by Vonderhaar et al. in Cheng et al. assembly cable in order to monitor status of a battery.

Regarding Claim 16, Vonderhaar et al. disclose in Figure 7, at least one of the first and the second electrical conductors comprise a sensor lead (720, Column 5, lines 10-15).

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Polizzano in view of Johnson, in view of Moenkhaus as, in view of Cheng et al. (US 6,796,841), and further in view of Hatrock (US 4,983,086).

Regarding Claim 17, Hatrock discloses, the first and second electrical conductors comprise acid-resistant connectors (Column 5, lines 9-17). It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a non-metallic acid resistant material as taught by Hatrock in Cheng et al. electrical connection in order to improve life of the electrical connection.

10. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA), in view of Polizzano (US 4,057,313), in view of Johnson (4,969,834) and in view of Moenkhaus et al. (US 6,500,025), and further in view of Cheng et al. (US 6,796,841).

Regarding Claim 23, APA, Polizzano, Johnson and Moenkhaus discloses the claim invention except, wherein the first electrical plug and the second electrical plug are housed in the first hand grip.

However, Cheng et al. discloses in Figure 2, wherein the first electrical plug and the second electrical plug are housed in the first hand grip. (noted that the above figure shows that all components are located in the handle).

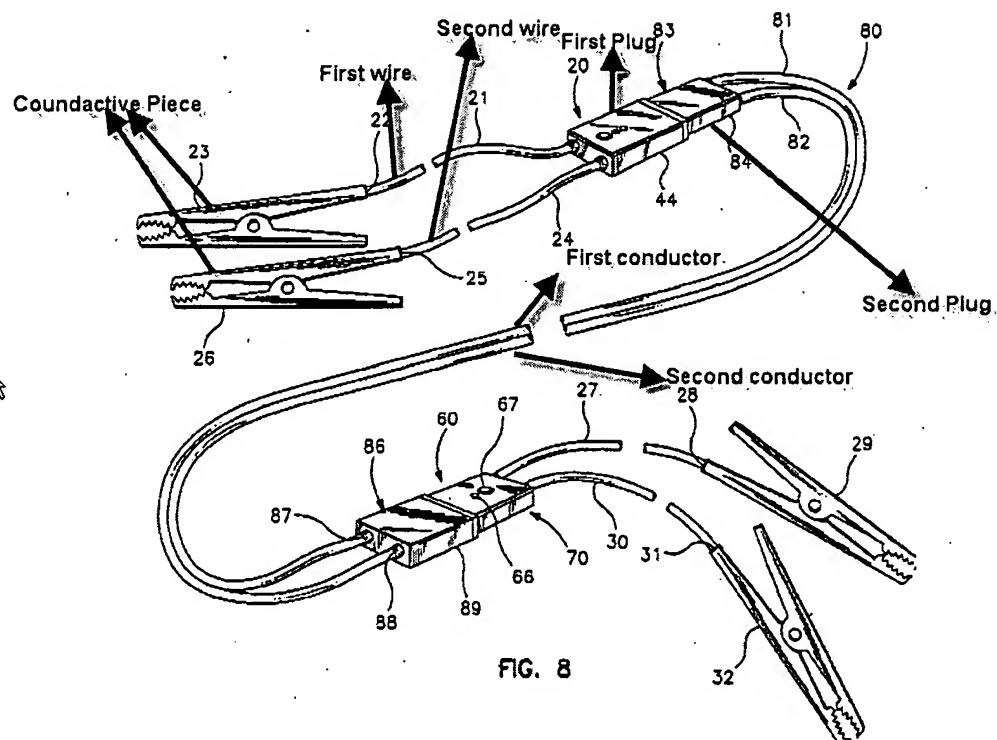
It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify APA's clamp and position all the components with in the handle as taught by Cheng et al. in order to protect the connection from diverse weather.

Response to Arguments

11. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection, or not persuasive.

In response to applicant's argument that there is no teaching or suggestion of "a first plug electrically coupled to the conductive piece coupled to the conductive piece through first and second wire connectors of the clamp and a second electrical plug coupled to the first and second electrical conductors of the cable, the second electrical plug configured to removably electrically couple with the first electrical plug to couple the first wire connector with the first electrical conductor and the second wire connector with the second electrical conductor." This is incorrect as stated in paragraph above and in the prior office communication.

Johnson discloses in Figure 8



a first plug (20) electrically coupled to the conductive piece (see figure above) coupled to the conductive piece through first and second wire (see figure above) connectors of the clamp and a second electrical plug (83) coupled to the first and second electrical conductors of the cable (see figure above), the second electrical plug configured to removably electrically couple with the first electrical plug to couple the first wire connector with the first electrical conductor and the second wire connector with the second electrical conductor. (Column 4, lines 66-68, Column 5, lines 1-8).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel Berhanu whose telephone number is 571-272-8430. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Akm Ullah can be reached on 571-272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gary L Laxton/

Gary L. Laxton
Primary Examiner
Art Unit 2838

SB